

# THE ROLE OF CHLOROQUINE AND HYDROXYCHLOROQUINE IN PROPHYLAXIS OF COVID-19: A LITERATURE REVIEW

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## ABSTRACT

**Background:** A pandemic potential Covid-19 spread rapidly worldwide. Ministry of Health, Republic Indonesia recommended one of the Covid-19 treatments with combination of hydroxychloroquine/ chloroquine and azithromycin. However, the effectiveness and safety of antimalaria regime remain debating topic. This study aimed to investigate the role of chloroquine and hydroxychloroquine in prophylaxis of Covid-19.

**Subjects and Method:** A systematic review was conducted by searching from PubMed, SpringerLink, and Cochrane Library databases. The keywords were “prophylaxis”, “chloroquine” OR “hydroxychloroquine” “SARS-CoV-2” OR “Covid-19”. The inclusion criteria were phase IIb clinical trials, double masking, comparative observational studies, open access articles published until August 2020. The exclusion criteria were inaccessible and duplicate articles. The quality of selected articles was critically appraised. The data were reported by PRISMA flow chart.

**Results:** Three articles out of 117 articles met the criteria inclusion. The findings showed that hydroxychloroquine could not prevent Covid-19 compatible disease or confirmed infections when used as post-exposure prophylaxis. High dose chloroquine was not recommended for critically ill COVID-19 patients because of its potential side effects, especially when administered with azithromycin and oseltamivir. Covid-19 patients with the need for oxygenation were not suggested to use hydroxychloroquine.

**Conclusion:** There is scarce evidence to support prophylaxis and treatment effects of chloroquine or hydroxychloroquine in COVID-19 patients. Further research on the safety and use of chloroquine or hydroxychloroquine is required in the management of Covid-19.

**Keywords:** prophylaxis, Chloroquine, Hydroxychloroquine, SARS-CoV-2, Covid-19

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